

**IN THE CLAIMS:**

1. (CURRENTLY AMENDED) A process for subterranean waste disposal and processing within a spent oil well ~~sealed earthen chamber~~, said process comprising the steps of:

1) providing a sealed, empty, subterranean, spent oil well containing halophilic, thermophilic, and methanogenic microbes therein ~~earthen chamber~~;

2) providing a waste receiving and processing system, said waste receiving and processing system comprising a series of ~~building~~ buildings and plants in operative communication with one another and a series of pipes operatively connecting said buildings and plants of the waste receiving and processing system to said subterranean spent oil well ~~earthen chamber~~,

said waste receiving and processing system having:

- a) a waste receiving and mechanical processing plant,
- b) a pumping plant, and
- c) a redox tank ~~plant~~, and
- d) an equipment housing building,

3) receiving and mechanically pulverizing waste and treating said waste such that it is transformed into slurry; and

4) disposing of said slurry in said spent oil well.

2. (CANCELLED)

3. (CURRENTLY AMENDED) The process for subterranean waste disposal and processing within a spent oil well ~~sealed earthen chamber~~ of claim 1 [[2]], further comprising the steps of providing said pumping plant with an inlet conduit coupling said pumping plant to said spent oil well ~~earthen chamber~~ and pumping said treated slurry into said spent oil well ~~earthen chamber~~.

4. (CURRENTLY AMENDED) The process for subterranean waste disposal and processing within a spent oil well ~~sealed earthen chamber~~ of claim 3, further comprising the steps of delivering ~~excess~~ slurry from said pumping plant to said redox tank plant and storing said treated slurry in said redox tank plant.

5. (CURRENTLY AMENDED) The process for subterranean waste disposal and processing within a spent oil well ~~sealed earthen chamber~~ of claim 4, further comprising the step of providing said equipment housing building with:

- a) a ventilation conduit,
- b) a specimen collection conduit.

- c) an electronic monitoring pipe,
- d) a displaceable chamber extraction conduit, said chamber extraction conduit having displacement means connected thereto for vertical displacement of said chamber extraction conduit thereby enabling gaseous samples to be obtained from different levels within said spent oil well, and
- e) a gas-burning electricity generating subsystem.

6. (CURRENTLY AMENDED) The process for subterranean waste disposal and processing within a spent oil well sealed earthen chamber, as in claim 5, ~~said step~~ further comprising the step of obtaining solid specimens ~~specimen~~ of said treated slurry via said specimen collection conduit.

7. (CURRENTLY AMENDED) The process for subterranean waste disposal and processing within a spent oil well sealed earthen chamber as in claim 6, ~~said step~~ further comprising the step of electronically monitoring waste products within said spent oil well earthen chamber with said electronic electrical ~~electrical~~ monitoring pipe.

8. (CURRENTLY AMENDED) The process for subterranean waste

disposal and processing within a spent oil well sealed earthen chamber of claim 7, ~~said step~~ further comprising the step of ~~comprises~~ vertically displacing said chamber extracting conduit and obtaining gaseous samples at different levels within said spent oil well earthen chamber.

9. (CANCELLED)

10. (CURRENTLY AMENDED) The process for subterranean waste disposal and processing within a spent oil well sealed earthen chamber as in claim 8 [[9]], wherein ~~said step~~ further comprising the step of ~~comprises~~ burning methane gas harvested from said spent oil well for the production of electricity via said gas-burning electricity generating subsystem.

11. (CURRENTLY AMENDED) A system for subterranean waste disposal and processing within a spent oil well sealed earthen chamber, said system comprising:

- 1) a sealed, empty, subterranean, spent oil well containing halophilic, thermophilic, and methanogenic microbes therein earthen chamber;
- 2) a waste receiving and processing system, said waste

receiving and processing system comprising a series of ~~building~~  
~~buildings~~ and plants in operative communication with one another  
and a series of pipes operatively connecting said buildings and  
plants of the waste receiving and processing system to said  
subterranean spent oil well ~~earthen chamber~~,

said waste receiving and processing system having:

- a) a waste receiving and mechanical processing plant,
- b) a pumping plant, and
- c) a redox tank plant, and
- d) an equipment housing building.

12. (CURRENTLY AMENDED) The system for subterranean waste disposal and  
processing within a spent oil well ~~sealed earthen chamber~~, as in claim 11, wherein said  
equipment housing building comprises:

- a) a ventilation conduit,
- b) a specimen collection conduit
- c) an electronic monitoring pipe,
- d) a displaceable chamber extraction conduit, said chamber extraction conduit having  
displacement means connected thereto for vertical displacement of said chamber extraction  
conduit, thereby enabling gaseous samples to be obtained from different levels within said spent  
oil well, and
- e) a gas-burning electricity generating subsystem.

13. (CANCELLED)